

plans. Finally, this approach will add to the EECA message that states and localities are expected to play the leading role in future government responses to energy shortages.

DOT and DOE are not the only federal agencies that might play major roles in promoting or requiring emergency planning by states and localities. Others could also assume substantial responsibilities in this area. As noted earlier, however, major institutional obstacles to conservation and contingency planning exist at the federal level as well as within states and localities. The lack of a coordinated federal approach to energy emergency issues, however, poses a serious threat to the success of state and local planning efforts.

To achieve this coordination, several steps may be necessary. First, it may be highly desirable for DOT and DOE to conduct internal reviews of their own policies, programs, and regulations to isolate obstacles to coherent emergency action. DOT, for example, might review its current emphasis on providing new capital rather than operating assistance funds to transportation providers. The agency might examine its policies toward ridesharing and other low-capital transportation projects to determine if a separate funding category is needed for these projects. DOT might analyze the substantial number of planning requirements that MPOs and transit authorities must currently satisfy to determine which of these requirements makes sense in an environment characterized by unstable petroleum supplies and rising fuel prices. Various DOT regulations (e.g., Section 504, Section 13c, and Buy American requirements) deserve study with regard to their application during energy shortages.

For its part, DOE's funding of state and local energy projects may warrant some review to determine if these projects promote emergency preparedness. The agency might examine means by which essential activities, including mass transportation services, can be assured of access to fuel during shortages if DOE's fuel-allocation program is terminated in 1981. Various kinds of line-control measures should be studied to identify those that deserve particular DOE support in the event of another shortage.

If DOT and DOE can reach agreement on in-house changes that are needed to respond to the energy problem, they will be in a good position to ask other federal agencies to join with them in efforts to promote or require transportation energy conservation and contingency planning. At a minimum, the policies and programs of other

federal agencies should be coordinated with those of DOT and DOE.

As one example of the usefulness of coordination, large private employers could be encouraged to develop conservation and contingency programs as part of broader local energy activities if (a) the Office of Management and Budget provided tax credits to employers who fund such programs, (b) the Internal Revenue Service determined that these programs do not constitute taxable fringe benefits for employees, (c) the Environmental Protection Agency required employers to prepare these programs in conjunction with local efforts to reduce air pollution, (d) the U.S. Department of Defense required its major contractors to develop these programs, (e) the U.S. Department of Housing and Urban Development funded only those land use developments for employers (e.g., industrial parks) that minimize energy consumption, (f) DOE encouraged states to require employers to implement conservation and contingency plans as part of state-sponsored EECA plans, and (g) DOT and DOE provided special funds to states and localities so that they could provide transportation services or technical assistance to employers.

Of course, coordination of federal policies and programs (and revision of these policies and programs where necessary) will be a lengthy process. Since the arrival of a fuel shortage will leave no time for extended deliberations, it would be most beneficial if the federal government began this coordination effort immediately.

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Background Information: Gasoline-Rationing Plan

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To better enable the United States to deal with future energy shortages, the U.S. Congress passed the Emergency Energy Conservation Act of 1979. This act requires that a gasoline-rationing plan be developed. The gasoline-rationing plan would not be put into effect unless a serious energy supply crisis occurs.

After the plan is formally submitted to Congress, Congress has 30 days to review it. Unless a joint resolution of disapproval is enacted, the plan would be considered approved and would then remain in standby status.

Rationing would not be imposed unless the President finds that a 20 percent shortfall exists or is likely to exist for at least 30 days. The President must notify the Congress of his finding together with a request to implement rationing. Either house of Congress may then disapprove the President's decision within 15 days. If the President finds it necessary to impose rationing with a less than 20 percent shortfall, both houses of Congress must approve its implementation.

The President, by executive order, has delegated the authority to develop the standby gasoline-rationing plan to

the U.S. Secretary of Energy. DOE has issued a proposed plan for public comment. Features of the proposed plan are discussed here briefly.

RATION ENTITLEMENTS

Eligibility for ration allotments would be determined on the basis of motor vehicle registration records. The calculation of ration coupons issued within each state would be in proportion to the state's base-period use of gasoline; thus, the degree of shortfall would be equally shared among the states. Supplemental allotments would be granted for certain priority activities to ensure the maintenance of essential public services. Supplemental allotments would also be granted to businesses and government organizations with significant off-highway gasoline requirements.

Although initial allotments to firms would be vehicle-based, supplemental allotments that reflect historic use would be provided as soon as practicable after the start of rationing. State and local rationing offices, established by state and local governments, would provide supplemental

allotments to hardship applicants. Responsibility for providing supplemental allotments that take into account the mobility needs of the handicapped would be delegated to the state and, in turn, to local offices by the states.

PRIORITY CLASSES

Priority status would be limited to activities that provide for national security, public transportation, protection of public health, safety and welfare, energy production, and maintenance of telephone and telecommunications services. Special status would also be given to farmers, who would receive sufficient allotments adequate to fully meet food and fiber production goals approved by the President.

RESERVES

State ration reserves would be established in each state for use by state and local offices in issuing hardship allotments. States would have considerable discretion in the use of their ration reserves, subject to limited DOE standards and guidelines. The responsibilities of state and local governments would increase in accordance with their capability and willingness to handle them, with the state ration reserves increased accordingly. DOE would establish and maintain a National Ration Reserve for use in meeting special national emergency needs and for such other purposes as DOE found necessary.

ISSUANCE OF RATION ALLOTMENTS

Ration allotments would be issued in the form of government ration checks, which would be exchanged for ration coupons at designated coupon-issuance points. These checks would be issued in advance of each ration period, with the allotment amount printed on the check. DOE or the states would issue supplemental allotment checks for

priority activities, farms, and other eligible firms. Checks would also be issued to states for their ration reserves.

COUPONS

DOE might adopt simplified procedures for establishing coupon eligibility (such as accepting walk-in applications) if it were necessary to impose rationing before the necessary preparatory measures had been completed. DOE would enlist the participation of a variety of qualified organizations as coupon-issuance points. These organizations would be supplied with coupons by DOE and would serve as ration-check-cashing points for recipients of government ration checks. Different series of coupons would be distributed. For each series, DOE would establish the date at which it becomes valid. Coupons would be valid until used, or until the end of the rationing program.

DOE would permit the sale or transfer of ration coupons on a voluntary basis. DOE would impose no price controls or other controls on this market, except as may be necessary to prevent activities disruptive to the rationing program.

RATION BANKING

Individuals and organizations would open ration banking accounts at participating ration banks, subject to DOE regulations concerning these accounts. Account holders could deposit valid coupons or ration checks to their accounts and could write ration checks against their accounts. Gasoline suppliers could open redemption accounts at ration banks. These redemption accounts would be used for deposit of redeemed (or canceled) ration coupons and ration checks received by the supplier in gasoline sales. These suppliers in turn would write checks on their redemption accounts to pay their suppliers for resupply of gasoline.

Economic Allocation of Gasoline Shortages

Carmen DiFiglio

The purpose of this paper is to evaluate ways of restoring economic allocation of gasoline supplies if severe interruptions of U.S. petroleum imports occur. Cost and benefits of gasoline price controls, taxes, rationing, and the time required to implement each approach will be estimated. Each plan will be defined and evaluated in terms of its likely impact on the gasoline market and the equity provided for gasoline consumers. The costs and benefits provided in this paper are necessarily based on certain assumptions, especially in terms of the degree of shortfall, the price elasticity of demand for gasoline, and other aspects of consumer behavior in the face of a shortage. However, the conclusions reached would survive a wide variation of assumptions used to calculate the various costs and benefits. In addition, the waste implied by mismanaging a severe gasoline shortage is enormous—at least \$75 billion annually or more. Therefore, we cannot afford to be casual about how gasoline shortages are dealt with. As discussed below, existing public opinion on this issue and the conclusions reached in this paper are entirely at variance with each other.

Much of the controversy regarding gasoline problems results from a wide difference of views as to what causes them and who is responsible. However, since the Iranian and Afghanistan crises, there is a growing realization that our future supply of Persian Gulf petroleum is not secure and that some external and uncontrollable event could interrupt or terminate a significant proportion of U.S. petroleum imports.

Approximately 25 percent of the petroleum consumed in

the United States is imported from Persian Gulf suppliers (1, pp. 5-9 and 5-22). If the supply of Persian Gulf oil were interrupted, considerably more than 25 percent of our normal oil supply would be unavailable because of increased worldwide demand for the exports still produced by suppliers outside of the Persian Gulf. If supplier countries rationed out the remaining petroleum, the United States could experience up to a 40 percent reduction in available petroleum (1, pp. 5-9 and 5-21).

Political scenarios that result in a substantial proportion of Persian Gulf oil being withdrawn from the world market are all too easy to imagine. These scenarios can involve domestic upheavals similar to what has occurred in Iran or can involve aggression as in Afghanistan (although not an oil producer, it is in the same geographic area). In addition, foreign intervention may help destabilize existing supplier-country governments by supporting revolutionary movements. Regardless of exactly how such upheavals may occur, future events could result in a loss of oil exports from major supplier countries. Also, the supply interruptions may not be of short duration. Changes in political regimes could result in an indefinite reduction of production (while providing more than adequate foreign exchange). Any serious violence in the area could result in the destruction of production or transshipment facilities that would eliminate exports for several years, possibly even a decade.

The possibility of a severe drop in petroleum supply concerns the transportation sector more than any other component of the economy because transportation is an